PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 21 August 2000 (21.08.00)	
International application No. PCT/IL99/00689	**Applicant's or agent's file reference** 127727 PCT
International filing date (day/month/year) 16 December 1999 (16.12.99)	**Priority date** (day/month/year) 24 December 1998 (24.12.98)
Applicant MILNER, Moshe et al	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

17 July 2000 (17.07.00)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer Charlotte ENGER
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

0807

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70) 14

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
127727 PCT		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/IL99/00689	16/12/1999	24/12/1998
International Patent Classification (IPC) or national classification and IPC G07F7/10		
Applicant MILNER, Moshe et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☒ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
17/07/2000	06.04.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Aupiais, B Telephone No. +49 89 2399 2756

Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IL99/00689

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:
Description, pages:

4-6	as originally filed			
1	as received on	06/02/2001	with letter of	04/02/2001
2,3	as received on	27/03/2001	with letter of	12/03/2001

Claims, No.:

1-4	as received on	27/03/2001	with letter of	12/03/2001

Drawings, sheets:

1/2,2/2	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   - ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
   - ☐ the language of publication of the international application (under Rule 48.3(b)).
   - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   - ☐ contained in the international application in written form.
   - ☐ filed together with the international application in computer readable form.
   - ☐ furnished subsequently to this Authority in written form.
   - ☐ furnished subsequently to this Authority in computer readable form.
   - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-4
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-4
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-4
	No:	Claims	

2. Citations and explanations
   see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Reference is made to the following documents:

D1: US-A-3 569 619
D2: US-A-5 095 196
D3: WO-A-93/11511

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Claim 1

None of the available documents discloses or suggests a method for verifying the identity of a credit card holder effecting a transaction whereby a camera is provided at a purchasing location to effect display of the credit card holder's image and data on a credit card company's image display means, the displayed image is compared with a stored image of the card holder, and if the images are identical or similar and credit is approved, a signal is transmitted to the purchasing location to complete the transaction.

Document D1 discloses a verification system using coded identifying and storage means having a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image into the company's data storage unit. At least one remotely positioned credit card reader and image display means is also provided, communicating with the company data storage unit, for selectively retrieving data from the storage unit to be displayed on the image display means and to be viewed and approved by the sales person.

Document D2 is directed to a system for examining a passer having an ID card including a photograph and key data for searching registered data of the passer. This system has a database storing registered data including a video image of the registered ID card owner, a video camera for capturing the passer's figure and a scanner for scanning the photograph of the ID card. The system searches corresponding data, including the video image data, in the database, usingthekey

data, and displays the found image, passer's image and the scanned photograph image in a display for comparison by an examiner.

Claims 2-3

The features of dependent claims 2 and 3 give a further description of the features claimed in claim 1.

Claim 4

None of the available documents discloses or suggests a method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal as set out in claim 4 in order to force the payment terminal operator or salesperson to perform proper comparison of card holder data to the customer present at the payment location. None of the available documents discloses or suggests to display to an operator at the sales terminal multiple images of identification data, at least of which is true and to prompt the payment terminal operator to select the correct data.

Document D3 discloses a personal identification device for allowing a user to identify himself, the device comprising a store of identity statements and a store of complex images, including key images linked with specific personal identity statements and false images not associated with personal identity statements. Knowledge of an identity statement is not sufficient to autorise a user; the user must also identify the correct image linked to that identity statement.

Re Item VII

Certain defects in the international application

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Re Item VIII

Certain observations on the international application

Claim 4 does not clearly indicate that the multiple images of identification data are displayed to an operator at the sales terminal (see description, page 5, lines 17-20) and therefore does not meet the requirements of Article 6 PCT.

CREDIT CARD VERIFICATION SYSTEM AND METHOD

Field of the Invention

The present invention relates to a credit card verification system and method.

Background of the Invention

Today, it is impossible to know whether a credit card presented for payment is in truth the credit card of the particular customer who is effecting the purchase; in other words, that the person presenting the card is its rightful owner.

At the time of effecting a transaction by means of a credit card at locations where a magnetic card reader is used, the card is passed through the reader and its details are communicated to the credit company. The credit company checks whether the card is in force, if the card was cancelled, if the card owner's bank approves the transaction at the indicated cost, and sometimes also other reasonable details of the purchase. This investigation does not provide a solution for cases in which the credit card is stolen, to the extent that the credit company does not yet know that the card was stolen. A credit company will approve a transaction using a stolen credit card, when it has not yet been informed that the card was stolen. In addition, credit cards are available upon which the owner's picture is printed; however, these cards are not protected, they can be counterfeited, and the cost of producing them is high.

The limited "self-defense" means of the credit company is usually considered to be the visual check of the salesperson collecting the payment, verifying that the signature of the purchaser conforms with the owner's signature sample on the card. Such verification is very limited, as it relies on the motivation of the salesperson and enables no performance supervisory control by the credit company.

U.S. Patent 3,569,619 discloses a verification system using coded identifying and storage means having a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image for each credit card holder. Means are provided for introducing the image into the company's data storage unit. At least one remotely positioned credit card reader and image display means is also provided, communicating with the company data storage unit, for selectively retrieving data

from the storage unit to be displayed on the image display means and to be viewed and approved by the sales person.

U.S. Patent 5,095,196 is directed to a security system having imaging functions, constituting an access control system for examining a passer having an ID card including a photograph and key data for searching registered data of the passer.

WO 93/11511 also discloses personal identification devices and access control systems.

Summary of the Invention

It is therefore a broad object of the present invention to overcome the above-described disadvantages of the use of credit cards and to provide a credit card verification method and system.

It is a further object of the present invention to provide a performance supervisory control program for a credit card system, operated at the payment location, which will force the salesperson to perform proper comparison of card holder data to the customer present at the payment location.

In order to achieve the above objectives, the invention provides a method for verifying the identity of a credit card holder effecting a transaction, comprising introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit or image display means; providing at least one credit card reader and a camera at a purchasing location for effecting communication with said data storage unit or image display means; operating said credit card reader and camera to effect display of the credit card holder's image and data on the company's image display means; comparing the displayed image with the stored image of the card holder, and if the images are identical or similar and credit is approved, transmitting a signal to said purchasing location to complete the transaction.

The invention further provides a method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal, said method comprising displaying multiple images of identification

data, at least one of which is true; prompting the payment terminal operator to select the correct data; determining whether the selected data is correct, and either completing or denying the transaction.

Brief Description of the Drawings

The invention will now be described in connection with certain preferred embodiments with reference to the following illustrative figures so that it may be more fully understood.

With specific reference now to the figures in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice.

CLAIMS

1. A method for verifying the identity of a credit card holder effecting a transaction, comprising:

introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit or image display means;

providing at least one credit card reader and a camera at a purchasing location for effecting communication with said data storage unit or image display means;

operating said credit card reader and camera to effect display of the credit card holder's image and data on the company's image display means;

comparing the displayed image with the stored image of the card holder, and

if the images are identical or similar and credit is approved, transmitting a signal to said purchasing location to complete the transaction.

2. The method as claimed in claim 1, wherein said camera is operated to photograph the credit card holder and to communicate the picture to said data storage unit or image display means.

3. The method as claimed in claim 1, wherein said camera is operated to photograph the image of the credit card holder embedded in the credit card and to communicate the picture to said data storage unit or image display means.

4. A method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal, said method comprising:

displaying multiple images of identification data, at least one of which is true;

prompting the payment terminal operator to select the correct data;

determining whether the selected data is correct, and

either completing or denying the transaction.

CREDIT CARD VERIFICATION SYSTEM AND METHOD

Field of the Invention

The present invention relates to a credit card verification system and method.

Background of the Invention

Today, it is impossible to know whether a credit card presented for payment is in truth the credit card of the particular customer who is effecting the purchase; in other words, that the person presenting the card is its rightful owner.

At the time of effecting a transaction by means of a credit card at locations where a magnetic card reader is used, the card is passed through the reader and its details are communicated to the credit company. The credit company checks whether the card is in force, if the card was cancelled, if the card owner's bank approves the transaction at the indicated cost, and sometimes also other reasonable details of the purchase. This investigation does not provide a solution for cases in which the credit card is stolen, to the extent that the credit company does not yet know that the card was stolen. A credit company will approve a transaction using a stolen credit card, when it has not yet been informed that the card was stolen. In addition, credit cards are available upon which the owner's picture is printed; however, these cards are not protected, they can be counterfeited, and the cost of producing them is high.

The limited "self-defense" means of the credit company is usually considered to be the visual check of the salesperson collecting the payment, verifying that the signature of the purchaser conforms with the owner's signature sample on the card. Such verification is very limited, as it relies on the motivation of the salesperson and enables no performance supervisory control by the credit company.

Summary of the Invention

It is therefore a broad object of the present invention to overcome the above-described disadvantages of the use of credit cards and to provide a credit card verification method and system.

It is a further object of the present invention to provide a performance supervisory control program for a credit card system, operated at the payment

location, which will force the salesperson to perform proper comparison of card holder data to the customer present at the payment location.

In order to achieve the above objectives, the invention provides a credit card verification system, comprising a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image of each credit card holder; means for introducing said image into said company data storage unit, and at least one remotely positioned credit card reader and image display means communicating with said company data storage unit, for selectively retrieving data from said storage unit to be displayed on said image display means, to be viewed and approved by the person providing sales services.

The invention further provides a credit card verification system, comprising a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image of each credit card holder; means for introducing said image into said company data storage unit; at least one image display means communicating with said company data storage unit, for displaying the image of an authorized credit card holder, and at least one remotely located credit card reader and camera for introducing data relating to said credit card holder into said data storage unit and for displaying the image of said selected credit card holder on said image display means.

In addition, the invention provides a method for verifying the identity of a credit card holder effecting a transaction, said method comprising introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit; providing at least one credit card reader and viewing means at a purchasing location for effecting communication with said data storage unit; operating said credit card reader and effecting display of the credit card holder's image and data on said viewing means; visually comparing the displayed image with the card holder to verify the holder's identity, and, if the images are identical or similar and credit is approved, completing the transaction.

The invention still further provides a method for verifying the identity of a credit card holder effecting a transaction, comprising introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit or image display means; providing at least one credit card reader and a camera at a purchasing location for effecting communication with said data storage unit or image display means; operating said credit card reader and camera to effect display of the credit card holder's image and data on the company's image display means; comparing the displayed image with the stored image of the card holder, and if the images are identical or similar and credit is approved, transmitting a signal to said purchasing location to complete the transaction.

In addition, the invention provides a method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal, said method comprising displaying multiple images of identification data, at least one of which is true; prompting the payment terminal operator to select the correct data; determining whether the selected data is correct, and either completing or denying the transaction.

Brief Description of the Drawings

The invention will now be described in connection with certain preferred embodiments with reference to the following illustrative figures so that it may be more fully understood.

With specific reference now to the figures in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice.

CLAIMS

1. A credit card verification system, comprising:

a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image of each credit card holder;

means for introducing said image into said company data storage unit, and

at least one remotely positioned credit card reader and image display means communicating with said company data storage unit, for selectively retrieving data from said storage unit to be displayed on said image display means, to be viewed and approved by the person providing sales services.

2. A credit card verification system, comprising:

a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image of each credit card holder;

means for introducing said image into said company data storage unit;

at least one image display means communicating with said company data storage unit, for displaying the image of an authorized credit card holder, and

at least one remotely located credit card reader and camera for introducing data relating to said credit card holder into said data storage unit and for displaying the image of said selected credit card holder on said image display means.

3. The system as claimed in claim 1 or claim 2, further comprising means for producing an electronically reproducible image of a credit card holder.

4. The system as claimed in claim 1 or claim 2, wherein said image display means is a screen or a printer.

5. The system as claimed in claim 2, wherein said camera is adapted to view the credit card holder and to communicate at least one image of said card holder to said data storage unit or image display means.

6. The system as claimed in claim 2, wherein said camera is adapted to view a picture embedded in a credit card and to communicate the picture to said data storage unit or image display means.

7. A method for verifying the identity of a credit card holder effecting a transaction, said method comprising:

introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit;

providing at least one credit card reader and viewing means at a purchasing location for effecting communication with said data storage unit;

operating said credit card reader and effecting display of the credit card holder's image and data on said viewing means;

visually comparing the displayed image with the card holder to verify the holder's identity, and, if the images are identical or similar and credit is approved,

completing the transaction.

8. A method for verifying the identity of a credit card holder effecting a transaction, comprising:

introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit or image display means;

providing at least one credit card reader and a camera at a purchasing location for effecting communication with said data storage unit or image display means;

operating said credit card reader and camera to effect display of the credit card holder's image and data on the company's image display means;

comparing the displayed image with the stored image of the card holder, and

if the images are identical or similar and credit is approved, transmitting a signal to said purchasing location to complete the transaction.

9. The method as claimed in claim 8, wherein said camera is operated to photograph the credit card holder and to communicate the picture to said data storage unit or image display means.

10. The method as claimed in claim 8, wherein said camera is operated to photograph the image of the credit card holder embedded in the credit card and to communicate the picture to said data storage unit or image display means.

11. A method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal, said method comprising:

displaying multiple images of identification data, at least one of which is true;

prompting the payment terminal operator to select the correct data;

determining whether the selected data is correct, and

either completing or denying the transaction.

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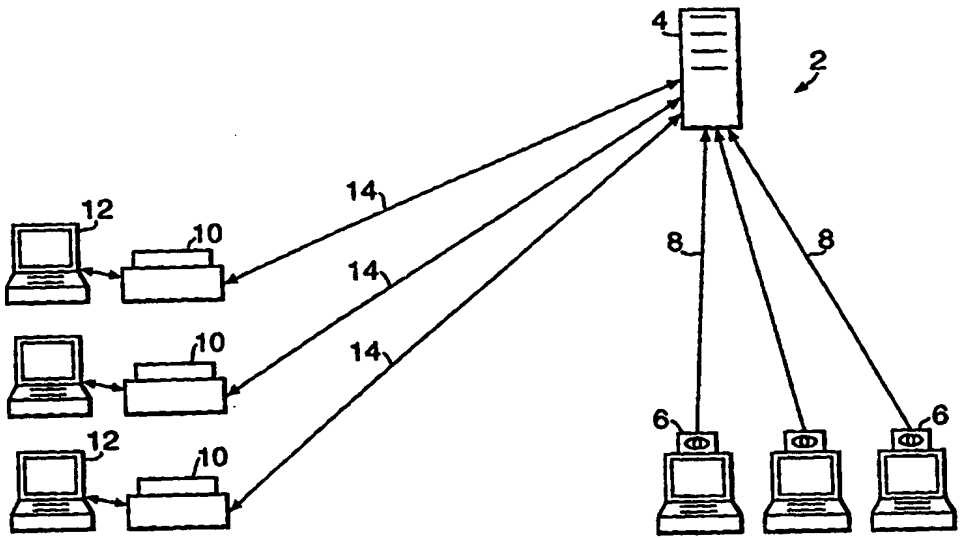
Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: CREDIT CARD VERIFICATION SYSTEM AND METHOD



(57) Abstract

The invention provides a credit card verification system, including a credit card company data storage and communication unit (4) for recording and storing data concerning authorized credit card holders, including an electronically reproducible image of each credit card holder; means (6) for introducing the image into the company data storage unit, and at least one remotely positioned credit card reader (10) and image display means (12) communicating with the company data storage unit, for selectively retrieving data from the storage unit to be displayed on the image display means, to be viewed and approved by the person providing sales services. The invention also provides a method for verifying the identity of a credit card holder effecting a transaction and a method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal.

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INTERNATIONAL SEARCH REPORT

Int. Application No
PCT/IL 99/00689

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G07F7/10 G07C9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G07F G07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"Facial Image Data on Credit Card for Identification" IBM TECHNICAL DISCLOSURE BULLETIN, vol. 30, no. 8, January 1988 (1988-01), page 366 XP002135214 Armonk, NY, USA the whole document	1-5,7
Y		6,10
Y	US 5 095 196 A (MIYATA) 10 March 1992 (1992-03-10) column 2, line 45 - line 63	6,10
X	WO 96 06409 A (GEEFIELD PTY. LTD.) 29 February 1996 (1996-02-29) page 9, line 21 - line 24 page 17, line 5 - line 21	1-5,7,8

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 April 2000	18/05/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Schofield, C

Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 744 715 A (AT&T IPM CORP.) 27 November 1996 (1996-11-27) column 4, line 25 - line 32	1-12
A	EP 0 590 224 A (RUSSI) 6 April 1994 (1994-04-06) column 4, line 16 - line 57	1-12
A	WO 93 11511 A (DAVIES) 10 June 1993 (1993-06-10) page 5, line 1 - line 8; figure 7	11

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int Application No
PCT/IL 99/00689

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5095196	A	10-03-1992	JP	2793658 B	03-09-1998
			JP	3062158 A	18-03-1991
WO 9606409	A	29-02-1996	AU	681541 B	28-08-1997
			AU	3335395 A	14-03-1996
			CA	2230230 A	29-02-1996
			CN	1166219 A	26-11-1997
			EP	0777890 A	11-06-1997
			JP	10508126 T	04-08-1998
EP 0744715	A	27-11-1996	CA	2176406 A	26-11-1996
			JP	9069138 A	11-03-1997
EP 0590224	A	06-04-1994	IT	1255617 B	09-11-1995
WO 9311511	A	10-06-1993	AT	176349 T	15-02-1999
			AU	669707 B	20-06-1996
			AU	4029193 A	28-06-1993
			CA	2123518 A	10-06-1993
			DE	69228315 D	11-03-1999
			DE	69228315 T	17-06-1999
			EP	0614559 A	14-09-1994
			ES	2129462 T	16-06-1999
			GB	2276967 A,B	12-10-1994
			GR	3029997 T	30-07-1999
			HK	57596 A	12-04-1996
			HU	66345 A,B	28-11-1994
			JP	7502351 T	09-03-1995
			US	5608387 A	04-03-1997

PATENT COOPERATION TREATY

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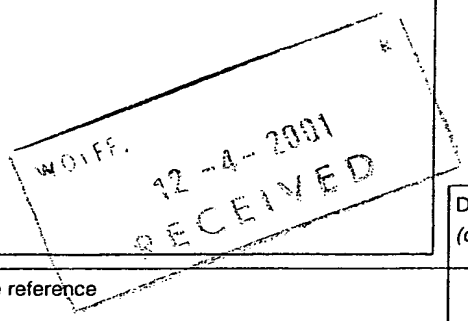

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing *(day/month/year)*	06.04.2001
Applicant's or agent's file reference 127727 PCT	**IMPORTANT NOTIFICATION**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/IL99/00689	16/12/1999	24/12/1998

Applicant
MILNER, Moshe et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

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Form PCT/IPEA/416 (July 1992)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
127727 PCT		

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/IL99/00689	16/12/1999	24/12/1998

International Patent Classification (IPC) or national classification and IPC
G07F7/10

Applicant
MILNER, Moshe et al.

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☐ Certain documents cited
   - VII ☒ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
17/07/2000	06.04.2001

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Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IL99/00689

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:
Description, pages:

4-6	as originally filed			
1	as received on	06/02/2001	with letter of	04/02/2001
2,3	as received on	27/03/2001	with letter of	12/03/2001

Claims, No.:

1-4	as received on	27/03/2001	with letter of	12/03/2001

Drawings, sheets:

1/2,2/2	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   - ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
   - ☐ the language of publication of the international application (under Rule 48.3(b)).
   - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   - ☐ contained in the international application in written form.
   - ☐ filed together with the international application in computer readable form.
   - ☐ furnished subsequently to this Authority in written form.
   - ☐ furnished subsequently to this Authority in computer readable form.
   - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:
   ☐ the claims, Nos.:
   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-4
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-4
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-4
	No:	Claims	

2. Citations and explanations
   see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Reference is made to the following documents:

D1: US-A-3 569 619
D2: US-A-5 095 196
D3: WO-A-93/11511

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Claim 1

None of the available documents discloses or suggests a method for verifying the identity of a credit card holder effecting a transaction whereby a camera is provided at a purchasing location to effect display of the credit card holder's image and data on a credit card company's image display means, the displayed image is compared with a stored image of the card holder, and if the images are identical or similar and credit is approved, a signal is transmitted to the purchasing location to complete the transaction.

Document D1 discloses a verification system using coded identifying and storage means having a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image into the company's data storage unit. At least one remotely positioned credit card reader and image display means is also provided, communicating with the company data storage unit, for selectively retrieving data from the storage unit to be displayed on the image display means and to be viewed and approved by the sales person.

Document D2 is directed to a system for examining a passer having an ID card including a photograph and key data for searching registered data of the passer. This system has a database storing registered data including a video image of the registered ID card owner, a video camera for capturing the passer's figure and a scanner for scanning the photograph of the ID card. The system searches corresponding data, including the video image data, in the database, usingthekey

data, and displays the found image, passer's image and the scanned photograph image in a display for comparison by an examiner.

Claims 2-3

The features of dependent claims 2 and 3 give a further description of the features claimed in claim 1.

Claim 4

None of the available documents discloses or suggests a method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal as set out in claim 4 in order to force the payment terminal operator or salesperson to perform proper comparison of card holder data to the customer present at the payment location. None of the available documents discloses or suggests to display to an operator at the sales terminal multiple images of identification data, at least of which is true and to prompt the payment terminal operator to select the correct data.

Document D3 discloses a personal identification device for allowing a user to identify himself, the device comprising a store of identity statements and a store of complex images, including key images linked with specific personal identity statements and false images not associated with personal identity statements. Knowledge of an identity statement is not sufficient to autorise a user; the user must also identify the correct image linked to that identity statement.

Re Item VII

Certain defects in the international application

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Re Item VIII

Certain observations on the international application

Claim 4 does not clearly indicate that the multiple images of identification data are displayed to an operator at the sales terminal (see description, page 5, lines 17-20) and therefore does not meet the requirements of Article 6 PCT.

CREDIT CARD VERIFICATION SYSTEM AND METHOD

Field of the Invention

The present invention relates to a credit card verification system and method.

Background of the Invention

Today, it is impossible to know whether a credit card presented for payment is in truth the credit card of the particular customer who is effecting the purchase; in other words, that the person presenting the card is its rightful owner.

At the time of effecting a transaction by means of a credit card at locations where a magnetic card reader is used, the card is passed through the reader and its details are communicated to the credit company. The credit company checks whether the card is in force, if the card was cancelled, if the card owner's bank approves the transaction at the indicated cost, and sometimes also other reasonable details of the purchase. This investigation does not provide a solution for cases in which the credit card is stolen, to the extent that the credit company does not yet know that the card was stolen. A credit company will approve a transaction using a stolen credit card, when it has not yet been informed that the card was stolen. In addition, credit cards are available upon which the owner's picture is printed; however, these cards are not protected, they can be counterfeited, and the cost of producing them is high.

The limited "self-defense" means of the credit company is usually considered to be the visual check of the salesperson collecting the payment, verifying that the signature of the purchaser conforms with the owner's signature sample on the card. Such verification is very limited, as it relies on the motivation of the salesperson and enables no performance supervisory control by the credit company.

U.S. Patent 3,569,619 discloses a verification system using coded identifying and storage means having a credit card company data storage and communication unit for recording and storing data concerning authorized credit card holders, including an electronically reproducible image for each credit card holder. Means are provided for introducing the image into the company's data storage unit. At least one remotely positioned credit card reader and image display means is also provided, [illegible]ating with the company data storage unit, for selectively retrieving data

from the storage unit to be displayed on the image display means and to be viewed and approved by the sales person.

U.S. Patent 5,095,196 is directed to a security system having imaging functions, constituting an access control system for examining a passer having an ID card including a photograph and key data for searching registered data of the passer.

WO 93/11511 also discloses personal identification devices and access control systems.

Summary of the Invention

It is therefore a broad object of the present invention to overcome the above-described disadvantages of the use of credit cards and to provide a credit card verification method and system.

It is a further object of the present invention to provide a performance supervisory control program for a credit card system, operated at the payment location, which will force the salesperson to perform proper comparison of card holder data to the customer present at the payment location.

In order to achieve the above objectives, the invention provides a method for verifying the identity of a credit card holder effecting a transaction, comprising introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit or image display means; providing at least one credit card reader and a camera at a purchasing location for effecting communication with said data storage unit or image display means; operating said credit card reader and camera to effect display of the credit card holder's image and data on the company's image display means; comparing the displayed image with the stored image of the card holder, and if the images are identical or similar and credit is approved, transmitting a signal to said purchasing location to complete the transaction.

The invention further provides a method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal, said method comprising displaying multiple images of identification

data, at least one of which is true; prompting the payment terminal operator to select the correct data; determining whether the selected data is correct, and either completing or denying the transaction.

Brief Description of the Drawings

The invention will now be described in connection with certain preferred embodiments with reference to the following illustrative figures so that it may be more fully understood.

With specific reference now to the figures in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice.

CLAIMS

1. A method for verifying the identity of a credit card holder effecting a transaction, comprising:

introducing data and an image relating to each authorized credit card holder into a credit card company's data storage and communication unit or image display means;

providing at least one credit card reader and a camera at a purchasing location for effecting communication with said data storage unit or image display means;

operating said credit card reader and camera to effect display of the credit card holder's image and data on the company's image display means;

comparing the displayed image with the stored image of the card holder, and

if the images are identical or similar and credit is approved, transmitting a signal to said purchasing location to complete the transaction.

2. The method as claimed in claim 1, wherein said camera is operated to photograph the credit card holder and to communicate the picture to said data storage unit or image display means.

3. The method as claimed in claim 1, wherein said camera is operated to photograph the image of the credit card holder embedded in the credit card and to communicate the picture to said data storage unit or image display means.

4. A method enabling credit companies to monitor and verify credit card holder identity when a payment transaction is performed at a sales terminal, said method comprising:

displaying multiple images of identification data, at least one of which is true;

prompting the payment terminal operator to select the correct data;

determining whether the selected data is correct, and

either completing or denying the transaction.